

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

WHAT IS CLAIMED IS:

1. A dental implant for supporting a dental prosthesis, the dental implant comprising a body portion and a top surface, the implant further comprising an internal cavity with an opening located at the top surface, the internal cavity comprising an interlock chamber having a depth measured from the top surface equal to a first distance, the interlock chamber comprising a cylindrical portion and plurality of semi-circular channels arranged around a periphery of the cylindrical portion, and a threaded chamber that includes threads and is located below the post-receiving chamber, wherein the cylindrical portion has a first radius and the channels have a second radius, a ratio of the first radius to the second radius being between approximately 4:1. and 2:1.
2. The dental implant according to Claim 1, wherein the ratio of the first radius to the second radius is approximately 3:1.
3. The dental implant according to Claim 1, wherein the first distance is greater than 1 millimeter.
4. The dental implant according to Claim 1, wherein the implant further includes a post-receiving chamber that is located below the interlock chamber and above the threaded chamber, the post receiving chamber having a depth measured from the top surface that is equal to a second distance.
5. The dental implant according to Claim 4, wherein the second distance is greater than approximately 3 millimeters.
6. The dental implant according to Claim 5, wherein the first distance is greater than 1 millimeter.
7. The dental implant according to Claim 1, wherein the interlock chamber comprises three channels.
8. The dental implant according to Claim 7, wherein the three channels are arranged around the perimeter of the interlock chamber such that each of the channels are approximately 120 degrees apart from one another.
9. The dental implant according to Claim 1, wherein the dental implant further includes a neck and a collar formed at least in part by a vertical side that has a length of approximately 2 millimeters.

10. The dental implant according to Claim 1, wherein the top surface of the implant has a third radius and a ratio of the third radius to the second radius being between approximately 5:1. and 4:1.

11. The dental implant according to Claim 1, wherein the ratio of the third radius to the second radius is approximately 4.5:1.

12. A prosthodontic assembly for installing a prosthetic tooth, the prosthodontic assembly comprising:

a first prosthodontic component comprising a body portion and a top surface, the first prosthodontic component further comprising an internal cavity with an opening located at the top surface, the internal cavity comprising an interlock chamber having a depth measured from the top surface equal to a first distance, the interlock chamber comprising a cylindrical portion with a plurality of semi-circular channels arranged around a perimeter of the cylindrical portion, and a threaded chamber that includes threads and is located below the interlock chamber, wherein the cylindrical portion has a first radius and the channels have a second radius, a ratio of the first radius to the second radius being between approximately 4:1. and 2:1.

a second prosthodontic component comprising an interlock area comprising a plurality of semi-circular protrusions configured to mate with channels of the first prosthodontic component.

13. The dental implant according to Claim 12, wherein the ratio of the first radius to the second radius is approximately 3:1.

14. The prosthodontic assembly according to Claim 12, wherein the first distance is greater than 1 millimeter.

15. The prosthodontic assembly according to Claim 12, wherein the first prosthodontic component includes a post-receiving chamber that is located below the interlock chamber and above the threaded chamber, the post-receiving chamber having a depth measured from the top surface that is equal to a second distance, the second prosthodontic component further comprising a post configured to mate with the post-receiving chamber of the first prosthodontic component.

16. The prosthodontic assembly according to Claim 15, wherein the second distance is greater than 3 millimeters.

17. The prosthodontic assembly according to Claim 16, wherein the first distance is greater than 1 millimeter.

5 18. The prosthodontic assembly according to Claim 12, wherein the interlock chamber comprises three channels and the interlock area comprises three protrusions.

10 19. The prosthodontic assembly according to Claim 12, wherein the three channels are arranged around the perimeter of the interlock chamber such that each of the channels are approximately 120 degrees apart from one another and the three protrusions are correspondingly arranged around the perimeter of the interlock area such that each of the protrusions are approximately 120 degrees apart.

15 20. The prosthodontic assembly according to Claim 12, wherein the first prosthodontic component further includes a neck and a collar formed at least in part by a vertical side that has a length of approximately 2 millimeters.

21. The dental implant according to Claim 12, wherein the top surface of the implant has a third radius and a ratio of the third radius to the second radius being between approximately 5:1 and 4:1.

20 22. The dental implant according to Claim 12, wherein the ratio of the third radius to the second radius is approximately 4.5:1.

23. A dental implant for supporting a dental prosthesis, the dental implant comprising a body portion and a top surface, the implant further comprising an internal cavity with an opening located at the top surface, the internal cavity comprising an interlock chamber having a depth measured from the top surface equal to a first distance, and a threaded chamber that includes threads and is located below the post-receiving chamber, the interlock channel being formed as a single continuous curve having substantially no internal corners.

25

24. The dental implant according to Claim 23, wherein the interlock channel is formed in the shape of an elliptically modified triangle.

30 25. The dental implant according to Claim 23, wherein the first distance is greater than 1 millimeter.

26. The dental implant according to Claim 23 further comprising a post-receiving chamber that is located below the interlock chamber and above the threaded chamber, the post-receiving chamber having a depth measured from the top surface that is equal to a second distance.

5 27. The dental implant according to Claim 26, wherein the second distance is greater than approximately 3 millimeters.

28. The dental implant according to Claim 27, wherein the first distance is greater than 1 millimeter.

10 29. The dental implant according to Claim 23, wherein the dental implant further includes a neck and a collar formed at least in part by a vertical side that has a length of approximately 2 millimeters.

30. A prosthodontic assembly for installing a prosthetic tooth, the prosthodontic assembly comprising:

15 a first prosthodontic component comprising a body portion and a top surface, the first prosthodontic component further comprising an internal cavity with an opening located at the top surface, the internal cavity comprising an interlock chamber having a depth measured from the top surface equal to a first distance, the interlock chamber being formed as a single continuous curve having substantially no internal corners, and a threaded chamber that includes threads
20 and is located below the post-receiving chamber,

a second prosthodontic component comprising an interlock area having a shape that corresponds to the shape of the interlock chamber.

25 31. The prosthodontic assembly according to Claim 30, wherein the interlock chamber of the first prosthodontic component and the interlock area of the second prosthodontic component are formed in a shape of an elliptically modified triangle.

32. The prosthodontic assembly according to Claim 30, wherein the first distance is greater than 1 millimeter.

30 33. The prosthodontic assembly according to Claim 30, wherein the first prosthodontic component includes a post-receiving chamber that is located below the

interlock chamber and above the threaded chamber, the post-receiving chamber having a depth measured from the top surface that is equal to a second distance.

34. The prosthodontic assembly according to Claim 33, wherein the second distance is greater than 3 millimeters.

5. 35. The prosthodontic assembly according to Claim 34, wherein the first distance is greater than 1 millimeter.

36. The prosthodontic assembly according to Claim 30, wherein the first prosthodontic component further includes a neck and a collar formed at least in part by a vertical side that has a length of approximately 2 millimeters.